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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/298,160	04/22/1999	DAN G. CUSTER	MI22-1172	1753

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WELLS ST. JOHN P.S.
601 W. FIRST
SUITE 1300
SPOKANE, WA 99201-3828

EXAMINER

OLSEN, ALLAN W

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 04/01/2002

19

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/298,160

Applicant(s)

CUSTER ET AL.

Examiner

Allan W. Olsen

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5 and 39-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,39-42 and 44-48 is/are rejected.
- 7) ☒ Claim(s) 43 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 3-5, 39-42, 44-46 and 48 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 5,800,626 issued to Cohen et al. (hereinafter, Cohen).

Cohen teaches a method of preparing an aqueous liquid for use in semiconductor wafer fabrication processes. In Cohen's method water is degassed and then regasified. The amount of dissolved gas in the regassified water is preferably between 60% and 98% of the amount of gas that is present in gas saturated water. Applicant's specification indicates that at 1 atm and at room temperature the gas saturation point for water is about 7000 ppb. Therefore, the dissolved gas content of Cohen's regassified water is greater than 200 ppb. Cohen teaches that the degassing process is not selective with respect to the particular gas that is removed. Cohen specifically makes reference to removing multiple gases from a solution in contact with air and Cohen teaches the composition of the dissolved gases mirrors that of the

ambient composition. As the composition of the dissolved gases in a plant-wide water supply system reflects the atmospheric composition, the water, prior to degassing, would have a dissolved oxygen content of greater than 200ppb. Cohen teaches a method of degassing water that makes use of a semi permeable membrane. Cohen teaches that the semi permeable membrane degasification method can be carried out in an atmosphere of nitrogen. By degassing in an ambient of nitrogen the degassing and regasification become a common step.

While Cohen does not teach using the regassified liquid in a "polishing process" the examiner notes that Claim 1 is directed to a method of preparing a liquid. Actually, the preamble now recites "[a] method of preparing a polishing process liquid for a semiconductor polishing process...". The examiner maintains that the "polishing process" is merely a reference to Applicant's future intended use of the liquid.

Limitations pertaining to a future intended use are given little patentable weight.

Specifically, the limitation is considered to the extent that a prior art solution, having been prepared by the method of claim 1, need only be capable of being used in the claimed future intended use in order for that prior art to be considered anticipatory.

Cohen's aqueous solution is made in the manner of claim 1 and it is certainly capable of being used in a wet-etch, semiconductor polishing process. See: figure 1; column 2, lines 31-44; column 3, lines 18, 55-60; column 4, lines 4-10; column 5, lines 5-15; column 7, lines 40-43, 59-66; col. 3, lines 59-60.

Claims 1 and 3-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Yeol et al. (US 6,039,815).

Yeol teaches a method of preparing a liquid by first degasifying the liquid and then regassing the liquid so that the dissolved gas content is greater than 200 ppb. While Yeol does not teach using the regassed liquid in a polishing process, the examiner notes that Claim 1 is positively recited as a method of preparing a liquid. Claim 1 twice refers to a polishing process. However, each reference is merely a statement of a future intended use of the liquid prepared by the method of claim 1. Statements of future intended use are given little patentable weight. Specifically, this limitation is considered to the extent that a prior art solution need only be capable of being used in the claimed future intended use. Yeol's aqueous solution is made in the manner of claim 1 and it is certainly capable of being used in a wet-etch, semiconductor polishing process. Therefore, Yeol teaches each and every limitation of claims 1 and 3-5. See: col. 5, lines 12-27; col. 6, lines 41-42; col. 7, lines 26, 42, 64.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen as applied to claim 1 above, and further in view of U.S. Patent 4,894,342 issued to Guinn et al.

Cohen does not teach using a sintered filter in the regasification process.

Guinn teaches the using a sintered filter to aid the dissolution of a gas in a liquid.

It would have been obvious to one skilled in the art to use of sintered filter because Guinn teaches that a sintered filter “transforms the gas flow into a multitude of tiny bubbles” (column 7, lines 12-14). This common aquarium practice significantly increases the surface area of the gas/liquid interface and thereby increases the rate at which a gas will dissolve into a liquid.

Response to Arguments

Applicant's arguments filed 01/15/2002 have been fully considered but they are not persuasive. Applicant persist in their attempt to incorporate method of using limitations into a method of making type claim, despite the fact that Applicant has already received several patents for methods of using a liquid that had been prepared by the method of instant claim 1. Applicant has amended the preamble of claim 1, from: “[a] method of preparing a liquid for a semiconductor fabrication polishing process”, to: “[a] method of preparing a polishing process liquid for a semiconductor polishing process” (emphasis added). As noted in the above rejection, the polishing process descriptor of the liquid is still being treated as a statement of future intended use. Examination has proceeded upon the basis that claim 1 is directed to a method of making a liquid. The fact that Applicant now refers to the liquid as a polishing process liquid only speaks to the manner in which Applicant intends to use the liquid after it has been made according to the method of making limitations of claim 1.

Notwithstanding the little patentable weight afforded to statements of future intended use, it is noted that Applicant's specification states that a liquid prepared by

the method of claim 1 may, like the liquid of Cohen, be used as a cleaning liquid. In fact, the claimed "polishing process" liquid is described in the specification as actually being used to displace, or clean, slurry from the surface of a substrate. Cohen's liquid and that of Applicant are further likened as Cohen too, states that the usefulness of the degassed and regassified liquid is not limited to the cleaning of silicon wafers.

Allowable Subject Matter

Claim 43 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

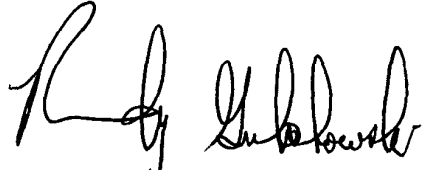
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Olsen whose telephone number is (703) 306-9075. The examiner can normally be reached on Monday through Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (703) 308-4333. The fax phone number for this Group is (703) 305-7719.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Allan Olsen, Ph.D.
March 24, 2002



RANDY GULAKOWSKI
SUPERVISORY PATENT EXAMINER
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